

**OCCUPATIONAL SAFETY  
AND HEALTH STANDARDS BOARD**

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ATTACHMENT NO. 3

**INITIAL STATEMENT OF REASONS****CALIFORNIA CODE OF REGULATIONS**

**TITLE 8: Chapter 4, Subchapter 7, Article 98, Section 5006 and New Section 5006.1  
of the General Industry Safety Orders (GISO)**

**Crane Operator Qualifications and Certification****SUMMARY**

This proposal separates California's existing Section 5006 operator qualifications requirements into two distinct sections. Existing Section 5006 remains intact and applies to all cranes with the exception of mobile cranes having a boom length of more than 25 feet or a maximum rated lifting capacity of more than 15,000 pounds and tower cranes. A new Section 5006.1 is created that will address mobile cranes of a certain size limit and tower cranes and contains language that addresses operator qualifications, certificates of competency, physical examinations, certifying entity acceptance, substance abuse testing, written and practical (hands-on) examinations, re-certification, trainees and effective dates.

Existing Section 5006 of the GISO addresses the issue of qualifications for employees who operate cranes or hoisting apparatus and requires the employer to ensure that employees who operate such equipment are qualified to do so before being permitted to operate the equipment. However, the regulation is silent as to what constitutes a "qualified" operator as it does not specify minimum criteria for competency, physical ability, training, testing, etc.

California's Group 13 safety orders which includes Section 5006 do not specify a threshold lifting capacity that could be used to determine applicability of the safety orders. Therefore, any equipment which is classified as a crane or hoisting apparatus under current Group 13 regulations is covered by existing Section 5006. The U.S. Department of Labor, Occupational Safety and Health Administration (Federal OSHA) addresses the issue of crane operator qualifications indirectly in 29 CFR 1926 Subpart N, Cranes, Derricks, Hoists, Elevators and Conveyors, specifically Part 1926.550 which regulates cranes and derricks. With specific regard to mobile cranes and tower cranes (the two types of cranes addressed in the proposed new Section 5006.1), Part 1926.550 states that all crawler, locomotive and truck cranes (includes mobile cranes) are to meet the applicable requirements for design, inspection, construction, testing, maintenance and operation as prescribed by the American National Standards Institute (ANSI) B30.5-1968

standard. It is in the operation section of this standard that operator qualifications (which includes testing) are addressed. However, they are not addressed to the same extent as contained in this proposal that, in part, is based on more comprehensive requirements set forth in the more recent American Society of Mechanical Engineers (ASME) B30.5a-1995 standard.

This proposal is the result of two petitions, OSHSB File Nos. 404 and 409 submitted by Ms. Bo Bradley, Associated General Contractors (AGC) of California and Mr. Brad Closson, North American Crane Bureau (NACB), respectively. The Petitioners opined that California's existing Section 5006, Crane Operator Qualifications requirements were too vague/non-specific to be effective in ensuring that crane operators are qualified to operate cranes and hoisting equipment. Both Petitioners proposed amendments to Title 8 crane regulations that would specifically address certificates of competency, operator physical qualifications, training, etc. The petitions were granted by the Board to the extent that an advisory committee be convened by Board staff.

### SPECIFIC PURPOSE AND FACTUAL BASIS OF PROPOSED ACTION

#### Section 5006. Operator Qualifications.

Existing Section 5006 contains subsections (a) and (b), which in generic, performance terms only allow employers to permit employees who are trained or known to be qualified to operate cranes or hoisting apparatus. Section 5006 permits trainees to be authorized by the employer to operate cranes and/or hoisting apparatus, provided they are under the supervision of a qualified operator.

A revision is proposed to amend the section title to read "Crane and Hoisting Equipment Operators-Qualifications" and to delete the phrase "...or known to be qualified..." in subsection (a). An EXCEPTION from the section is proposed that specifically excludes mobile and tower cranes as regulated by new Section 5006.1.

The proposed revisions are necessary to clarify to the employer that Section 5006 pertains to cranes and hoisting equipment. The proposed revision also eliminates vague and ambiguous language relating to the qualification of a crane/hoisting apparatus operator. The proposed EXCEPTION statement is necessary to clarify to the employer that mobile cranes and tower cranes as regulated in Section 5006.1 are excluded from the requirements of Section 5006 that apply to all other cranes.

#### New Section 5006.1. Mobile Crane and Tower Crane-Operator Qualifications and Certification.

New Section 5006.1 consisting of six subsections (a-f) and entitled "Mobile Crane and Tower Crane-Operator Qualifications and Certification" addresses specific operator qualifications for employees who operate mobile and tower cranes and includes the following: certificates of competency, physical examinations and substance abuse testing, written and hands-on (practical) examinations, acceptance of the National Commission on Certifying Agencies (NCCA) accredited certifying entities, re-certification of operators, trainees, effective dates and three exceptions pertaining to the types of mobile cranes excluded, operation of digger-derrick trucks and marine terminals.

New subsection (a) addresses operator qualifications and requires that only employees issued a certificate of competency be allowed to operate cranes. The proposed subsection requires the employer to ensure that the operator has been issued a valid certificate of competency (certificate) by a certifying entity based on the qualifications criteria specified in (a)(1)-(4). The criteria includes documentation certifying that the employee has passed a physical examination within the last five years, has passed a substance abuse test, has passed a written examination, which at a minimum addresses operational characteristics and controls, emergency control skills that are appropriate for the type of crane or hoisting equipment the employee intends to operate, and has demonstrated the ability to read and comprehend the crane manufacturer's operation and maintenance instruction materials, including load capacity information, and exhibit mathematical skills. In addition, the proposal requires those employers who are issued certificates to first have knowledge depending on which type of crane(s) the employee intends to operate, in specific chapters of the ASME B30.5a-1995 (mobile cranes) or B30.4-1996 (tower cranes) standard relating to operation of the crane.

As a prerequisite to receiving the certificate of competency required in subsection (a), the employee will have to pass a "hands-on" examination to demonstrate proficiency in the specific type of crane the employee intends to operate.

The proposed regulations are necessary to ensure that all operators of mobile and tower cranes covered by this section possess the physical, mental, theoretical knowledge and practical skills to operate the crane safely in a manner that will prevent a serious, catastrophic accident which could result in severe employee injury and/or a fatality. In addition, the proposed language is necessary to clarify to the employer what constitutes a qualified operator of a mobile or tower crane in terms of the pre-requisite knowledge, skills and qualifications specified in subsection (a).

New subsection (b) requires the certificate of competency to be issued by the certifying entity and be valid for a maximum of five (5) years.

New subsection (b) is necessary to clarify to the employer that only an accredited certifying entity may issue the certificate of competency and the length of time the certificate of competency is valid. The proposed language is necessary to ensure that only operators who have a valid certificate of competency operate mobile and/or tower cranes in order to prevent catastrophic accidents that might result from a lack of proper qualifications.

New subsection (c) clarifies which organizations constitute "Accredited Certifying Entities" and states that any organization's certification program that is accredited by the NCCA is a certifying agency.

The proposed regulation is necessary to clarify to the employer that only certificates of competency issued by organizations accredited by the NCCA are acceptable in terms of the requirements in new subsection (a). The proposed subsection (c) is also necessary to clarify to the Division that they need only determine that the employee's certificate(s) of competency has been issued by an NCCA accredited certifying entity.

New subsection (d) specifies that operators must re-certify every five years and permits operators who are able to document at least 1000 hours experience operating a crane covered by Section 5006.1 and who meet the physical and substance abuse requirements specified in new subsections (a)(1) and (a)(2) and the written examination specified in subsection (a)(3) to re-certify without taking the hands-on examination. Employees unable to certify 1000 hours must take the hands-on examination in addition to (a)(1)-(3).

The proposed subsection (d) is necessary to clarify to the certifying entity how an employee who intends to operate the crane(s) addressed by Section 5006.1 may do so when they already possess previous crane operation experience and their certificate of competency is expiring. The proposed language is necessary to ensure continuity in competency of the crane operator to safely operate the crane(s) covered by Section 5006.1 thereby reducing the potential for a serious catastrophic accident.

New subsection (e) permits trainees to operate mobile or tower cranes covered by new Section 5006.1 provided they are under the direct supervision of an operator possessing a valid certificate of competency specifically for the same type of crane the trainee intends to operate.

New subsection (e) is necessary to clarify to the employer the conditions that a trainee may be authorized to operate a mobile or tower crane. The proposed language is necessary to prevent operators who lack competency from operating cranes in a manner which could result in a catastrophic accident and serious employee injury or fatality.

Subsection (e) also is necessary to clarify to the employer what is meant by the phrase “direct supervision” and is necessary to clarify to the employer how trainees are to be supervised in accordance with the requirement in subsection (e) in order to ensure that the crane is operated safely.

New subsection (f) specifies the effective date for the requirements of Section 5006.1 for mobile cranes and for tower cranes as being June 1, 2005.

Proposed subsection (f) is necessary to ensure that the California marketplace will have sufficient time for outside testing entities and those employers who seek to certify in-house to develop and offer/implement accredited certifying programs that satisfy the requirements of Section 5006.1 for mobile and tower cranes.

Three “EXCEPTIONS” are proposed which will exclude: (1) mobile cranes having a boom length of less than 25 feet or a maximum rated lifting capacity of less than 15,000 pounds; (2) electric line trucks (digger/derrick trucks) as defined in Electrical Safety Orders Section 2700 and used by utility companies that are regulated by Section 2940.7 of the High Voltage Electrical Safety Orders; and (3) cranes used at marine terminal operations regulated under Article 14 of the GISO.

The proposed exceptions are necessary to ensure that the focus of the proposed regulations in Section 5006.1 is directed at mobile and tower cranes specifically, which demonstrate a level of

accident potential that could result in a serious and/or catastrophic accident. The exceptions are also necessary to clearly indicate to both employers and the Division that such cranes are not included within the requirements of new Section 5006.1 but may be addressed by Section 5006 or other vertical Title 8 crane requirements.

#### DOCUMENTS RELIED UPON

1. Occupational Safety and Health Standards Board Decision adopted February 17, 2000 in the Matter of Petition by Ms. Bo Bradley, AGC California, Petition No. 404.
2. Occupational Safety and Health Standards Board Decision adopted April 13, 2000 in the Matter of Petition by Mr. Bradley D. Closson, NACB Technical Services, Inc., Petition No. 409.
3. Standards for educational and psychological testing, published by the American Educational Research Association, copyright 1999 by the American Educational Research Association, American Psychological Association, and the National Council in Measurement in Education.
4. The American Society of Mechanical Engineers (ASME) B30.5-2000 (Revision of ASME B30.5-1994) Mobile and Locomotive Cranes, Chapters 5-0 through 5-3.
5. The American Society of Mechanical Engineers (ASME), B30.5a-2002, Addenda to ASME B30.5-2000 Mobile and Locomotive Cranes, Chapters 5-0 through 5-3.
6. The American Society of Mechanical Engineers (ASME) B30.4-1996 (Revision of ASME B30.4-1990), Portal, Tower, and Pedestal Cranes, Chapters 4-0 through 4.2.
7. The American Society of Mechanical Engineers (ASME) B30.5-1968, Safety Standard for Crawler, Locomotive and Truck Cranes.
8. Resource Briefs, Licensure Examinations, Norman R. Hertz, Ph.D and Roberta N. Chinn, Ph.D., The Council on Licensure, Enforcement and Regulation, 99-2.
9. Resource Briefs, Job Analysis: A Guide for Regulatory Boards, Roberta N. Chinn, Ph.D. and Norman R. Hertz, Ph.D., The Council on Licensure, Enforcement and Regulation, 98-5.
10. 29 CFR 1910.6a, Operator Qualification Requirements, Federal Incorporated Requirements Compared to Current ASME B30 Requirements.
11. Memorandum from the US Department of Labor, Occupational Safety and Health Administration (Fed-OSHA), Dated April 24, 1991 from Roy Gurnham to Leo Carey.

These documents are available for review Monday through Friday from 8:00 a.m. to 4:30 p.m. at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California.

### REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE ECONOMIC IMPACT ON SMALL BUSINESSES

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small businesses.

### SPECIFIC TECHNOLOGY OR EQUIPMENT

This proposal will not mandate the use of specific technologies or equipment.

### COST ESTIMATES OF PROPOSED ACTION

#### Costs or Savings to State Agencies

Board staff has identified two state agencies: the California Department of Transportation and the Department of Water Resources as being the two primary public agencies who own and operate mobile cranes which are covered by the proposal and, who will experience cost impact as a result of the proposed language. (See addendum to Form 399 for specific details).

#### Impact on Housing Costs

The Board has made an initial determination that this proposal will not significantly affect housing costs.

#### Impact on Businesses

The proposal applies to tower cranes and mobile cranes with a boom length of 25 feet or more or a maximum lifting capacity of 15,000 pounds or more. These two categories represent a small percentage of the total number and type of cranes in use in California. During the course of the advisory committee and subcommittee deliberations, it became apparent to staff that California employers and organized labor have, as has been shown to be the case in the rest of the country, recognized both the value, benefit and importance of having qualified operators at the controls of their cranes. Many employers and both Operator Engineer bargaining units (Locals 12 and 3) in California currently subject their operators to not only crane operator training consistent with California's Section 3203 Injury Illness Prevention Program requirements, but to certification either in-house or by accredited certifying entities such as NCCCO. The consensus opinion of members of staff's crane operator certification/qualifications subcommittee confirms that the proposal is essentially consistent with what a significant number of employers and Labor in California have been doing for a number of years in terms of certification. Finally, some consideration should be given to the fact that the costs of certification, which include testing, physical examinations and substance abuse determinations, when amortized over a five year time period present costs that are insignificant compared to the employer's overall operating costs and the direct and indirect costs associated with a single crane accident that most likely could involve employee injuries, fatality, imperiling the public and property damage.

Therefore, The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

#### Cost Impact on Private Persons or Businesses

Current Title 8 regulations already require all operators of cranes and hoisting equipment in California to be qualified. The existing regulations also specify that trainees are to be permitted to operate a crane or hoisting apparatus under the supervision of a qualified operator. The proposal clarifies in specific terms what constitutes "being qualified" to operate a mobile crane and a tower crane and supervise trainees; all other types of cranes are not affected, and therefore, there will be no impact upon employers who operate cranes other than the cranes and hoisting equipment regulated by new Section 5006.1. For all other types of cranes, the existing requirements of Section 5006 remain unchanged. For those employers who operate mobile cranes covered by proposed Section 5006.1 and/or tower cranes, the overall cost impact is expected to be minimal.

Organizations such as the National Commission for the Certification of Crane Operators (NCCCO) or the North American Crane Bureau (NACB) have the capability to perform testing and certification. Staff learned that the NCCCO can feasibly modify its testing/certification programs to meet the proposed testing/certification requirements. Typical NCCCO costs for the written and practical examination that would cover mobile crane operations run approximately \$550 per operator. The costs for substance abuse testing and the physical examination are \$440 per operator. Spread out over a five-year period that would equal approximately \$198 per operator per year. This appears to be insignificant compared to overall operating costs and the cost of one crane accident which could result in significant employee injury or even fatality in addition to any collateral damage to property, structures and equipment totaling in the hundreds of thousands of dollars.

While staff has not identified any entities offering testing/certification services for tower cranes, staff learned that the NCCCO is developing a program that will be available to employers by the time the proposal becomes effective in 2005. Staff anticipates that if the proposal is adopted by the Board and becomes effective, other testing and certification entities will emerge and provide testing/certification for tower crane operators. The cost of tower crane operator testing and certification is expected to be about the same as for mobile crane operators (see approximate figures discussed above). See also the Board staff's addendum to the Form 399 which accompanies this rulemaking file.

According to the proposed effective date, employers will have until June 1, 2005 to come into compliance with the requirements. This will provide time for the California marketplace to respond to the new regulations and allow for the emergence of additional outside parties (contractors such as the NCCCO) able to provide the required training and issue certificates of competency to employees (operators) who have fulfilled the requirements of new Section 5006.1(a). The 2005 effective date will also provide sufficient time for testing protocols to be developed for tower crane operators and to allow entities who wish to become certifying entities to apply for NCCA accreditation.

Costs or Savings in Federal Funding to the State

The proposal will not result in costs or savings in federal funding to the state.

Costs or Savings to Local Agencies or School Districts Required to be Reimbursed

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate."

Other Nondiscretionary Costs or Savings Imposed on Local Agencies

This proposal does not impose nondiscretionary costs or savings on local agencies.

DETERMINATION OF MANDATE

The Occupational Safety and Health Standards Board has determined that the proposed regulations do not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these regulations do not constitute a "new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution."

The California Supreme Court has established that a "program" within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed regulations do not require local agencies to carry out the governmental function of providing services to the public. Rather, the regulations require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, these proposed regulations do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v. State of California (1987) 189 Cal.App.3d 1478.)

These proposed regulations do not impose unique requirements on local governments. All employers - state, local and private - will be required to comply with the prescribed standards.

EFFECT ON SMALL BUSINESSES

The Board has determined that the proposed amendments may affect small businesses.



### ASSESSMENT

The adoption of the proposed amendments to these regulations will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

### ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.